

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) An apparatus for measuring a three-dimensional shape of an object to be measured by irradiating and scanning the object with a laser light, the apparatus comprising:

optical means for dividing the laser light into a plurality of beams having a predetermined angle in between for the irradiation; and

discriminating means for reading out and discriminating each of a plurality of reflected laser light beams, the plurality of the reflected laser light beams corresponding to the plurality of divided beams, respectively, and the plurality of divided beams being used for the irradiation by the optical means,

wherein the discriminating means reads out the plurality of reflected laser light beams reflected on the object that is irradiated by the optical means and determines whether or not an interval between the pluralities of reflected laser light beams corresponds to the predetermined angle.

2. (Canceled).

3. (Original) The apparatus for measuring a three-dimensional shape according to Claim 1, wherein the optical means comprises a hologram plate for dividing the laser light into the plurality of beams with the predetermined angle.

4. (Previously Presented) The apparatus for measuring a three-dimensional shape according to Claim 1, wherein the optical means comprises:

a laser light source for emitting the laser light;

a hologram plate for dividing the laser light emitted from the laser light source into the plurality of beams with the predetermined angle; and

a scanning mirror for scanning the plurality of beams of the laser light divided by the hologram plate.

5. (Previously Presented) The apparatus for measuring a three-dimensional shape according to Claim 1, wherein the optical means comprises:

- a laser light source for emitting the laser light;
- a scanning mirror for scanning the laser light from the laser light source; and
- a hologram plate for dividing a laser light scanned by the scanning mirror into the plurality of beams with the predetermined angle.

6. (Previously Presented) The apparatus for measuring a three-dimensional shape according to Claim 3, wherein the optical means comprises:

- a laser light source for emitting the laser light;
- a hologram plate for dividing the laser light emitted from the laser light source into the plurality of beams with the predetermined angle; and
- a scanning mirror for scanning the plurality of beams of the laser light divided by the hologram plate.

7. (Canceled).

8. (Currently Amended) A method for measuring a three-dimensional shape of an object to be measured by irradiating and scanning the object with a laser light, the method comprising:

- dividing the laser light into a plurality of beams having a predetermined angle in between for the irradiation;

- reading out each of a plurality of reflected laser light beams, the plurality of the reflected laser light beams corresponding to the plurality of divided beams, respectively, and the plurality of divided beams being used for the irradiation; and

- generating three dimensional shape data for said object by determining whether or not an interval between the plurality of reflected laser light beams corresponds to the predetermined angle to generate and generating the three dimensional shape data for said object when said interval corresponds to the predetermined angle.

9. (Original) The method for measuring a three-dimensional shape of an object according to Claim 8, wherein the determination of whether or not the interval corresponds to the predetermined angle is performed by comparing read-out reflected light data and a predetermined template data.

10. (Original) The method for measuring a three-dimensional shape of an object according to Claim 9, wherein the predetermined template data includes a plurality of patterns.

11. (Previously Presented) The method for measuring a three-dimensional shape of an object according to claim 8, wherein said determining step distinguishes read out reflected light beams reflected from said object from reflected light beams caused by a light disturbance.